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SUBJECT: The Soviet Bloc Aluminum Industry

There are indications that the Soviet Satellites will become self-sufficient in Aluminum Production during 1954 and that production in the USSR is now on a scale that allows increased allocations for civilian consumption in addition to wider military end-use and increased stock piling.

As an indicator of strategic military strength aluminum is second only to steel. The shifting pattern of modern warfare places increasing emphasis on aluminum primarily because it is virtually irreplaceable and is the major component of airframes for military and transport aircraft. With the growth of the Soviet Bloc atomic potential, production of long-range and fighter aircraft is of transcending importance.

The US and Canada are the only countries which annually produce greater quantities of aluminum than does the USSR. The Free World aluminum industry, however, is based primarily on large-tonnage civilian uses, whereas about 80 percent of Soviet aluminum production is channeled into direct and indirect military end uses.

The Soviet aluminum industry was nonexistent until 1932, and until World War II, development was slow and relatively insignificant. When the only operating Soviet aluminum plants were overrun by the German military in World War II, the US supplied the USSR with completely integrated facilities for aluminum production, plus large tonnages of metal. The Soviets therefore quickly acquired a modern ready-made aluminum industry geared solely to a war economy and to the task of turning out military aircraft. During the postwar period when other industrial nations were curtailing production of aluminum, the Soviets accelerated their output and undertook a program of expanding their aluminum capacity.

Under Soviet stimulus the more industrial European Satellites can now fulfill their aluminum requirements with domestic production. Hungary, the largest producer, has an exportable surplus. The Chinese aluminum industry however is insignificant.

The ten Soviet aluminum plants are large, integrated installations extremely vulnerable to both enemy attack and sabotage. The production know-how and processing techniques for the Soviet aluminum industry are comparable in quality to those of the Free World.

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To guarantee a continued supply of aluminum metal in the event of an emergency, the USSR is allocating an estimated 25 percent of its annual production to a strategic stockpile. It is also expected that the USSR will continue efforts to obtain additional aluminum for this stockpile in the world market.

The Soviet aluminum supply is sufficient to fulfill current military requirements and to allow significant tonnages for civilian use: The planned expansion program for the industry appears feasible, and there is no indication that input shortages will impede this achievement. The Soviet aluminum productive capacity increased more than 400 percent in the decade prior to 1953, and it is expected that the 1953 production capacity will be more than doubled before 1960 (table I). An evaluation of the Soviet aluminum potential indicates that sufficient metal will be available to sustain a major war economy for at least one year, now or during any period up to 1960.

The US aluminum industry as a result of the unprecedented defense requirements at the outset of the Korean War doubled production capacity during the 1951-1955 period. This expansion program enabled the US to maintain its 3 to 1 proportion over the Soviet Bloc, and indications are that planned US expansion programs will maintain this ratio through 1960.

The following table shows the world primary aluminum production for the peak war year, for 1953, and the planned expansions which will be completed before the end of 1955.

WORLD PRIMARY ALUMINUM PRODUCTION

IN METRIC TONS

<u>Country</u>	<u>1943</u>	<u>Percent of</u>		<u>Percent of</u>		<u>Percent of</u>	
		<u>World</u>	<u>Production</u>	<u>World</u>	<u>Production</u>	<u>World</u>	<u>Production</u>
North America	1,284,502	65.8	1,626,814	64.9	2,229,000	61.1	
Free Europe	351,504	18.0	447,715	17.9	571,000	15.0	
Free Asia	142,376	7.3	54,191	2.2	128,000	3.5	
Free World	1,778,462	91.1	2,128,720	85.0	2,928,000	79.6	
USSR	62,340	3.2	330,000	13.2	545,000	15.0	
Soviet Satelites	111,330	5.7	47,000	1.8	162,000	4.4	
Soviet Bloc	173,670	8.9	377,000	15.0	707,000	19.4	
World	1,952,132	100	2,506,919	100	3,636,000	100	